

Plenty of Planaria



Overview

Students will begin an investigation into the role of proliferation and differentiation in the regeneration of Planaria (flatworms). This investigation was created by the Northwest Association for Biomedical Research (NWABR) as part of its stem cell research and ethics curriculum. The complete experiment can take two weeks, and it is the best model system available to examine regenerative capacity and how stem cell function is highly conserved across phyla. The Planaria lab investigation addresses the **Next Generation Science Standards (NGSS) Performance Expectation HS-LS1-4**. View the standards that apply to this unit.

Access the Planaria lab investigation [here](#).

Amazingly, adult pluripotent stem cells called neoblasts underlie the regeneration of Planaria. Students should first become familiar with the anatomy, habitat, and behaviors of Planaria and then learn how to culture them. The "Planaria Intro Powerpoint" and the "Plenty of Planaria Student Background," as well as several readings below, provide this information.

EASY background reading

MID background reading with videos

Background reading and worksheet

Important terminology

See the "Plenty of Planaria Teacher Overview."

Outline of lesson

Northwest Association for Biomedical Research: Plenty of Planaria lab (1-2 weeks)

1. Teacher overview
2. Student research project

Source URL: <https://www.cirm.ca.gov/our-progress/plenty-planaria>